FIG. 1

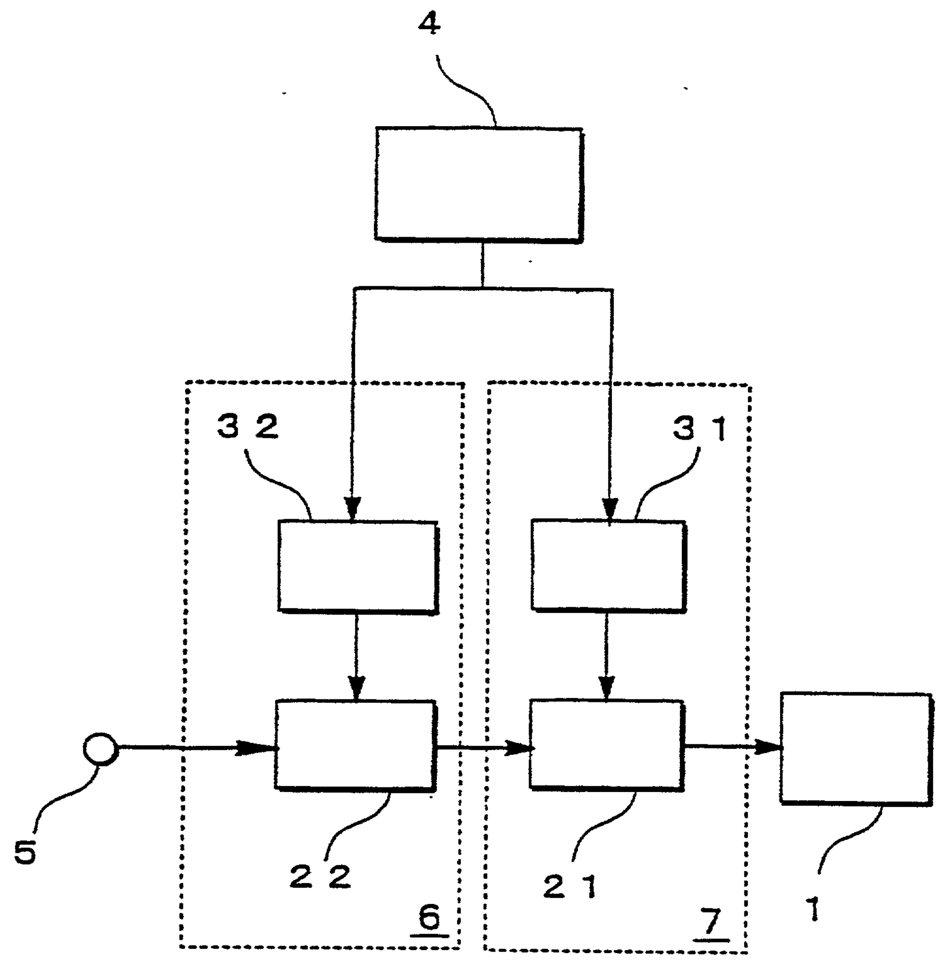


FIG. 2

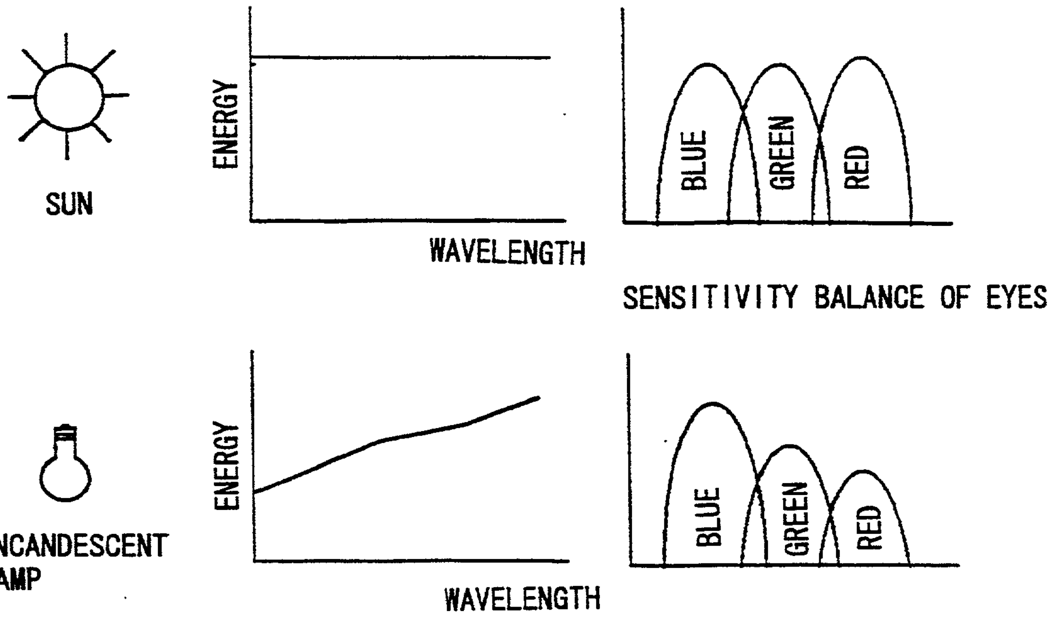

SUN
ENERGY
WAVELENGTH
BLUE
GREEN
RED
SENSITIVITY BALANCE OF EYES
INCANDESCENT LAMP
ENERGY
WAVELENGTH
BLUE
GREEN
RED

FIG. 3

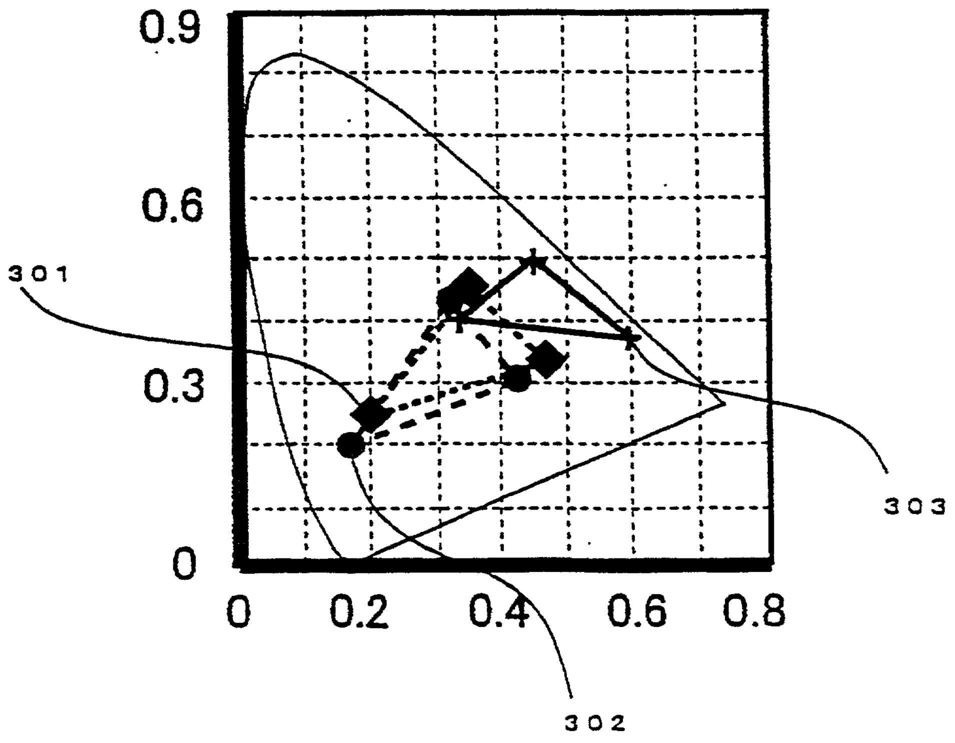

0.9
0.6
0.3
0
0
0.2
0.4
0.6
0.8
301
302
303

FIG. 4

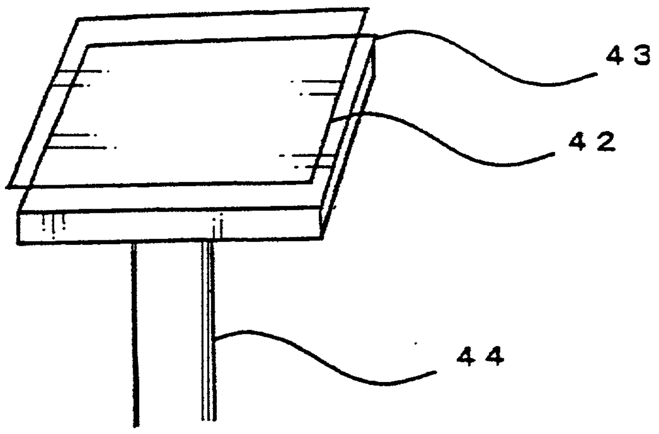


FIG. 5

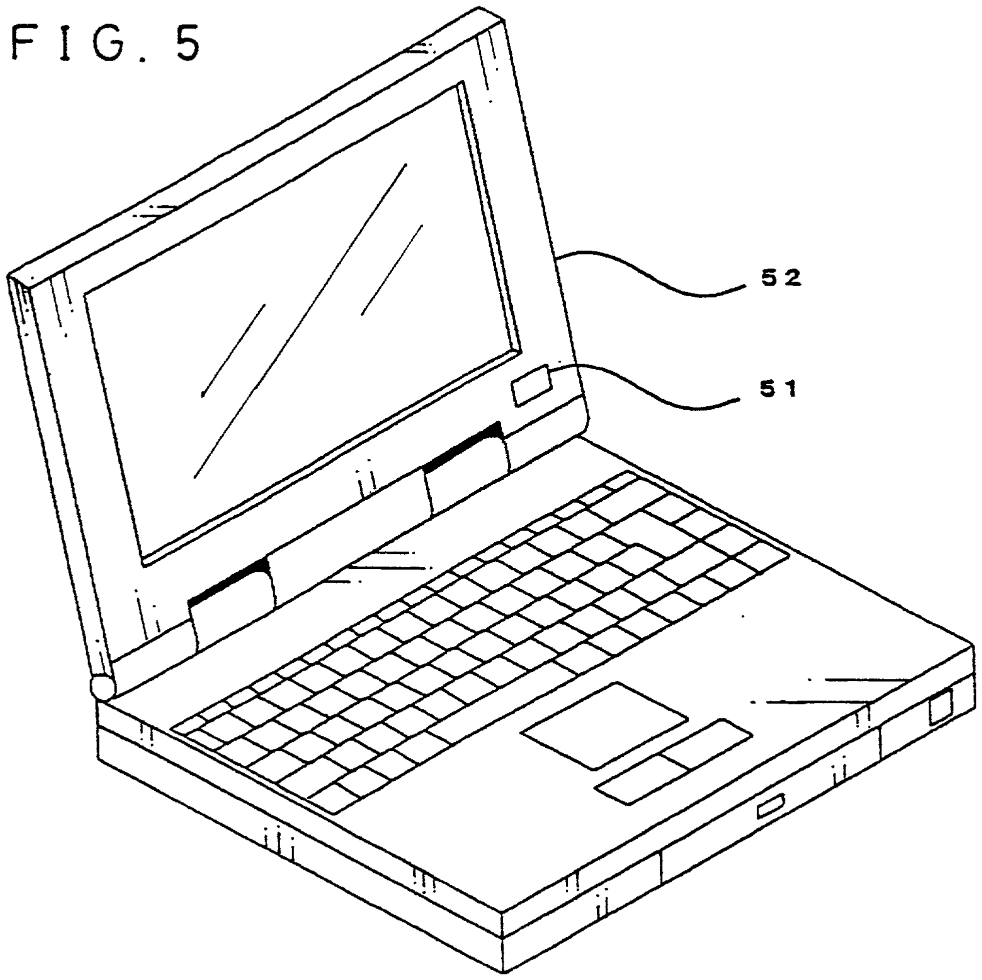
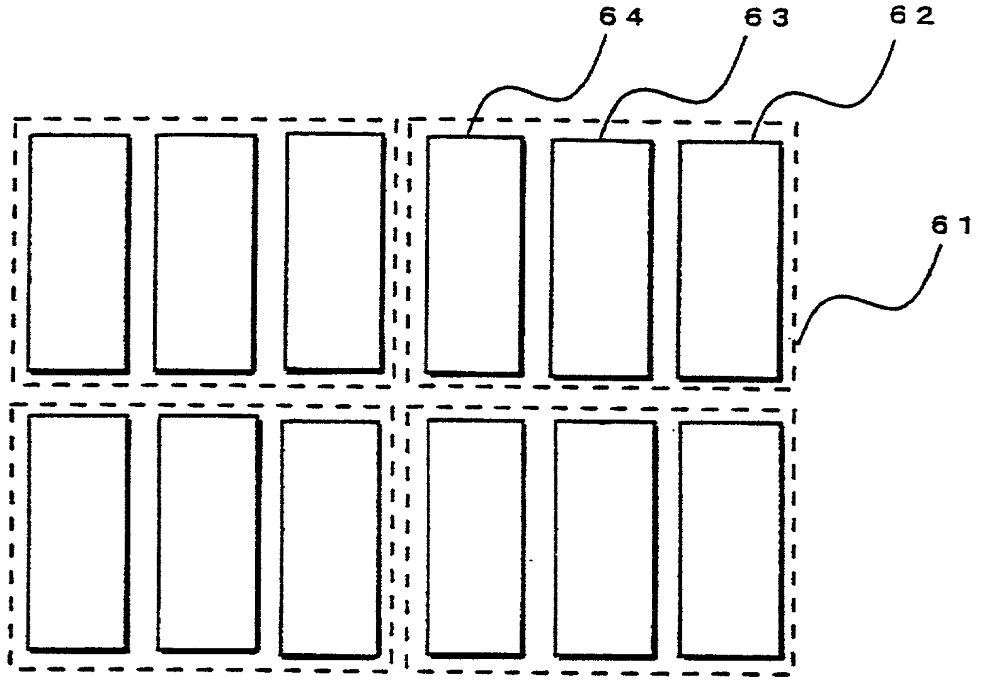


FIG. 6



F I.G. 7

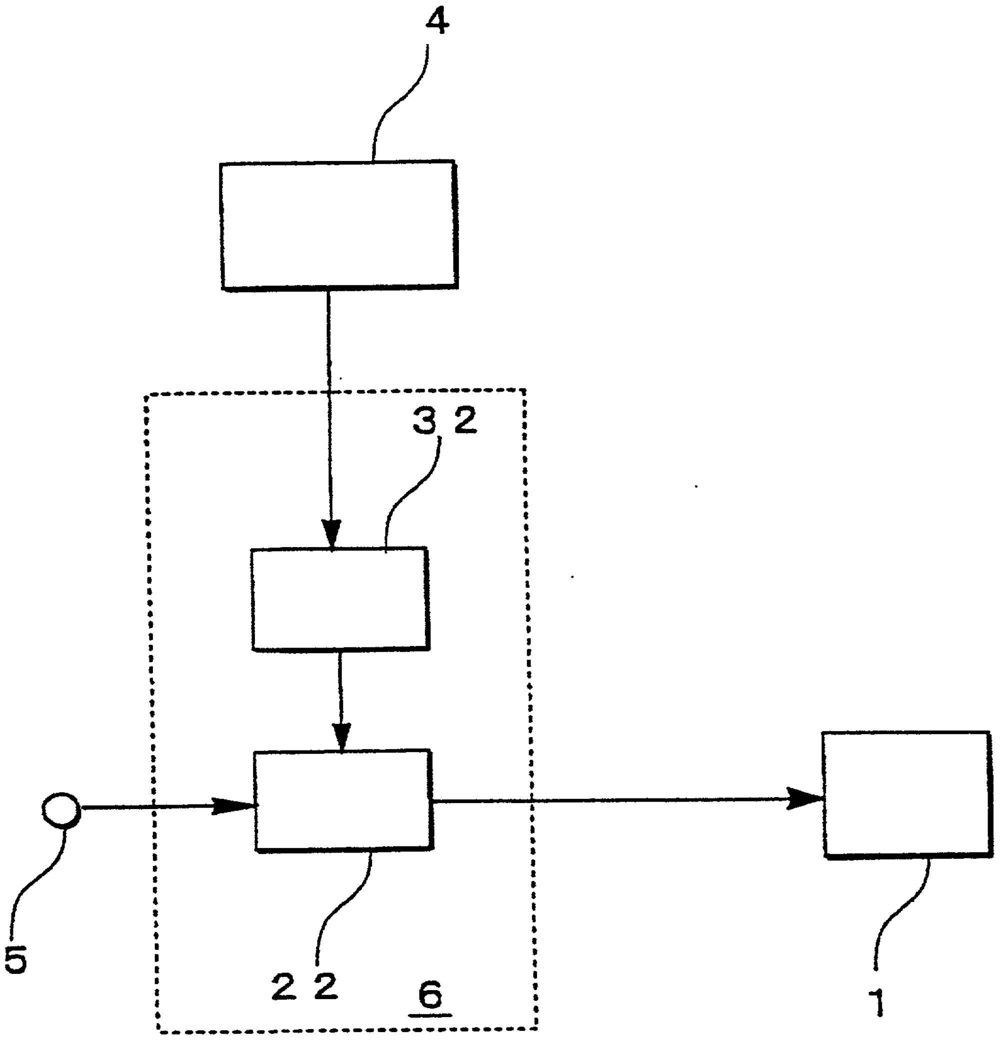


FIG. 8

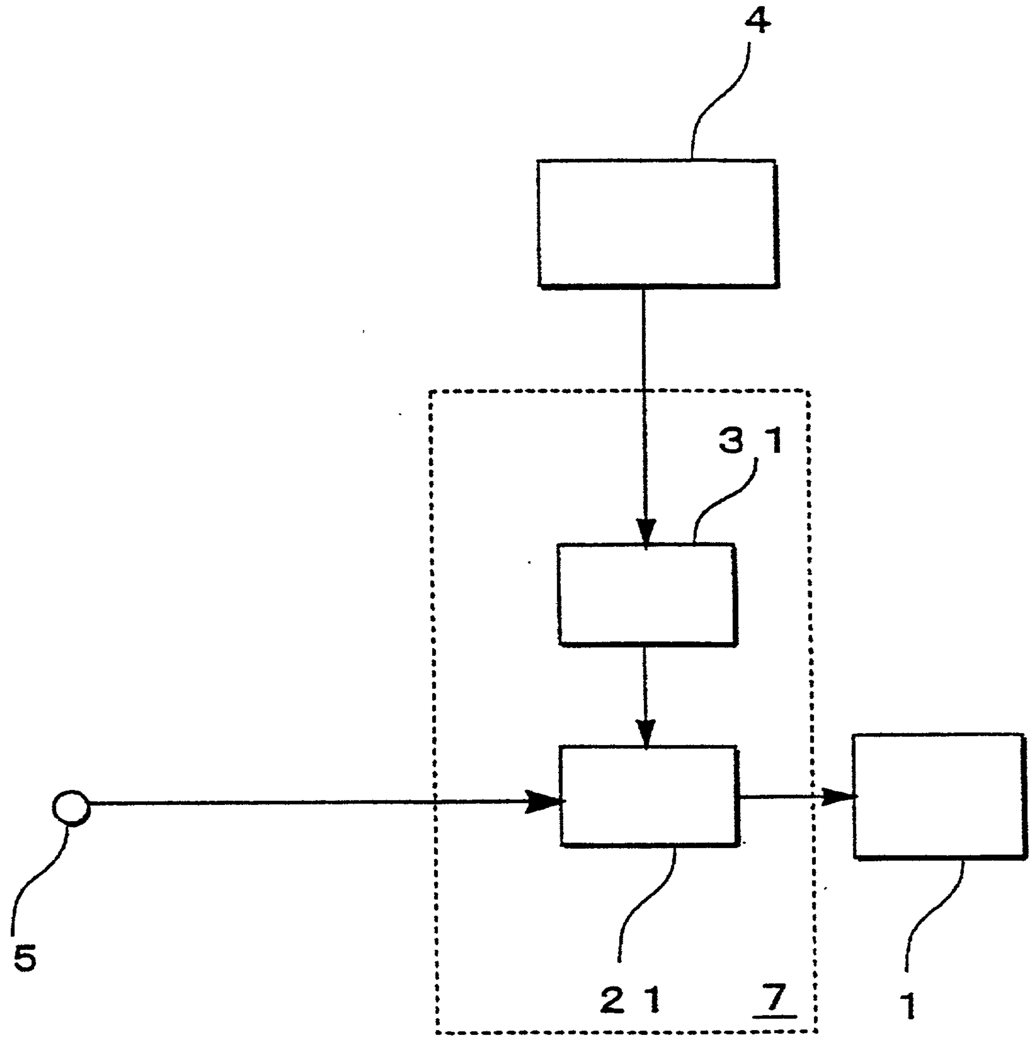


FIG. 9

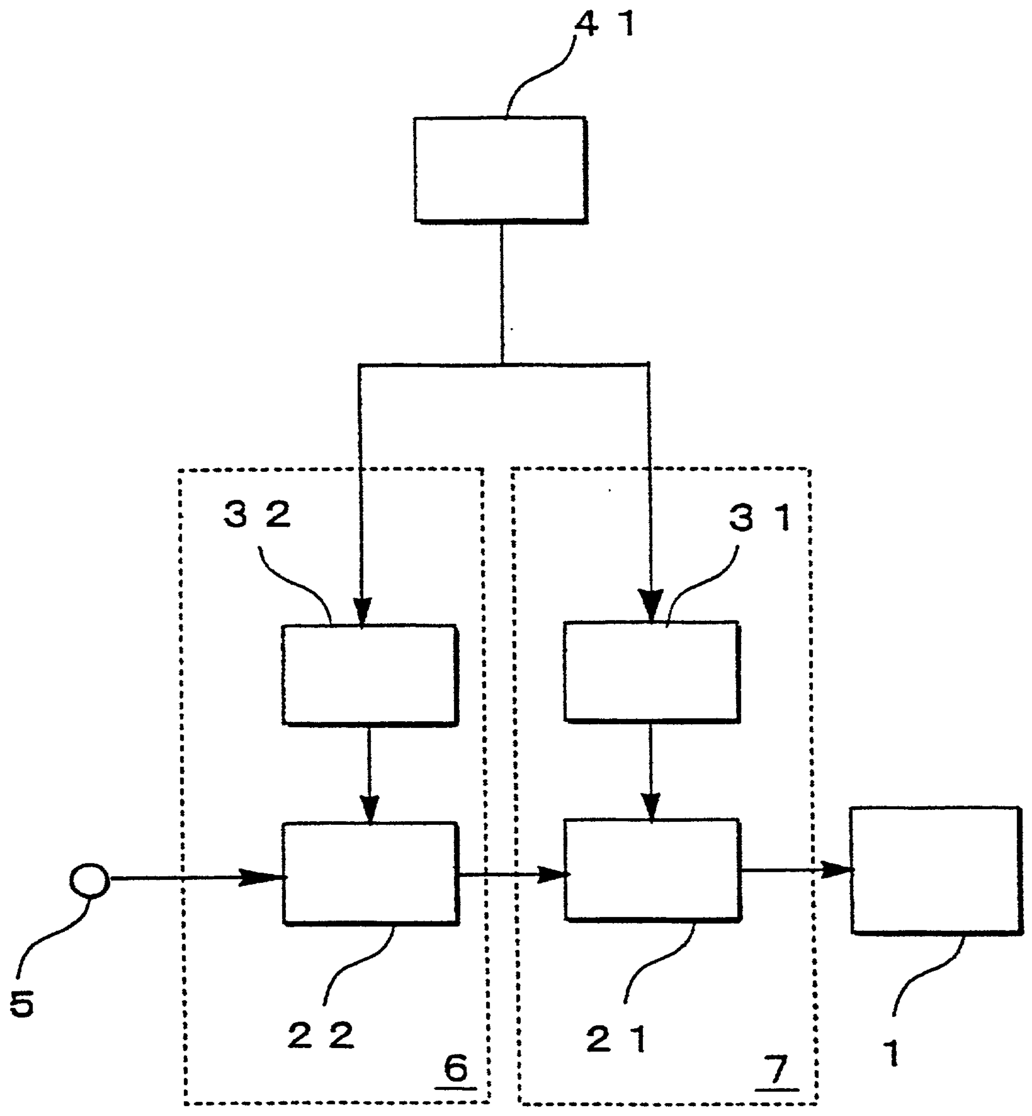


FIG. 10

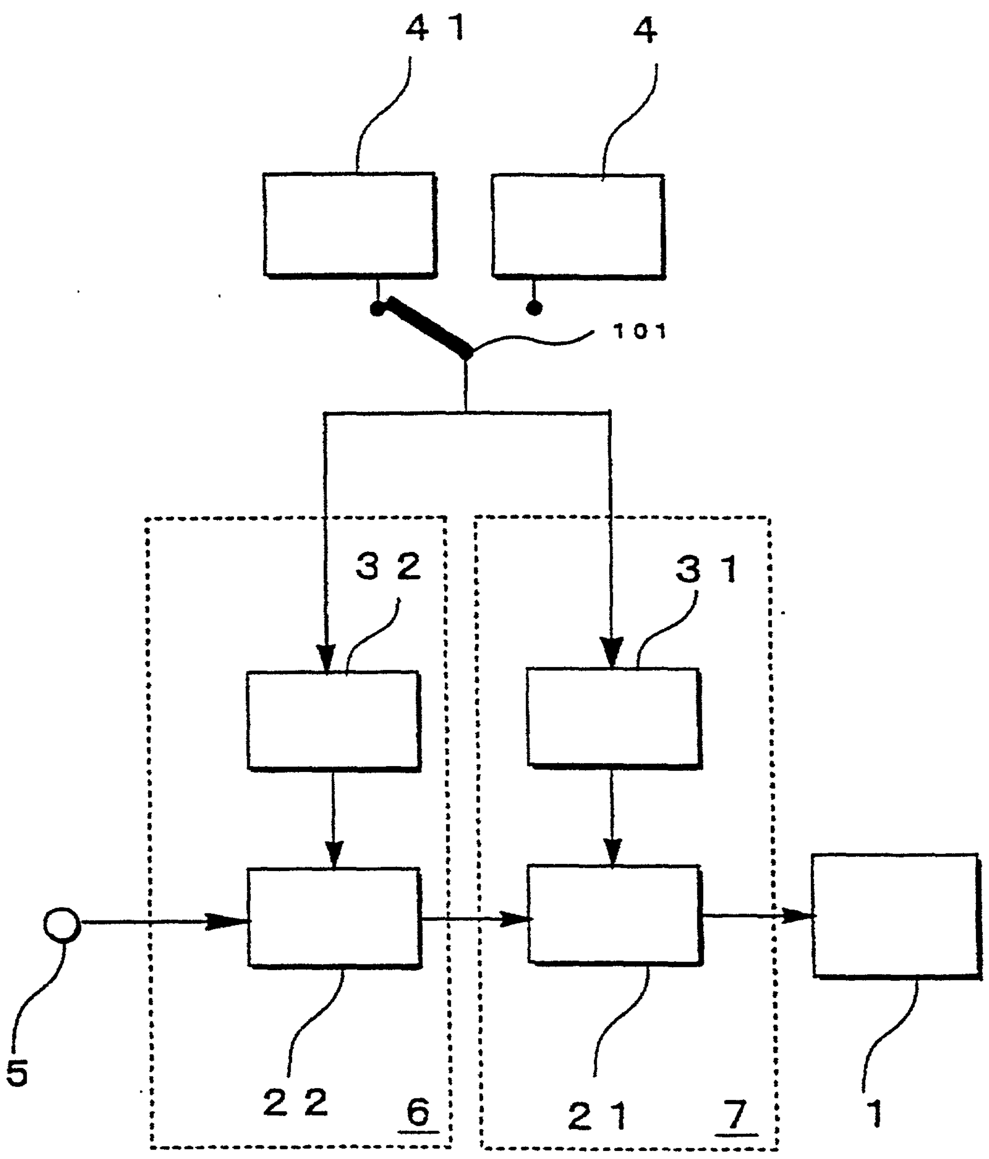


FIG.11

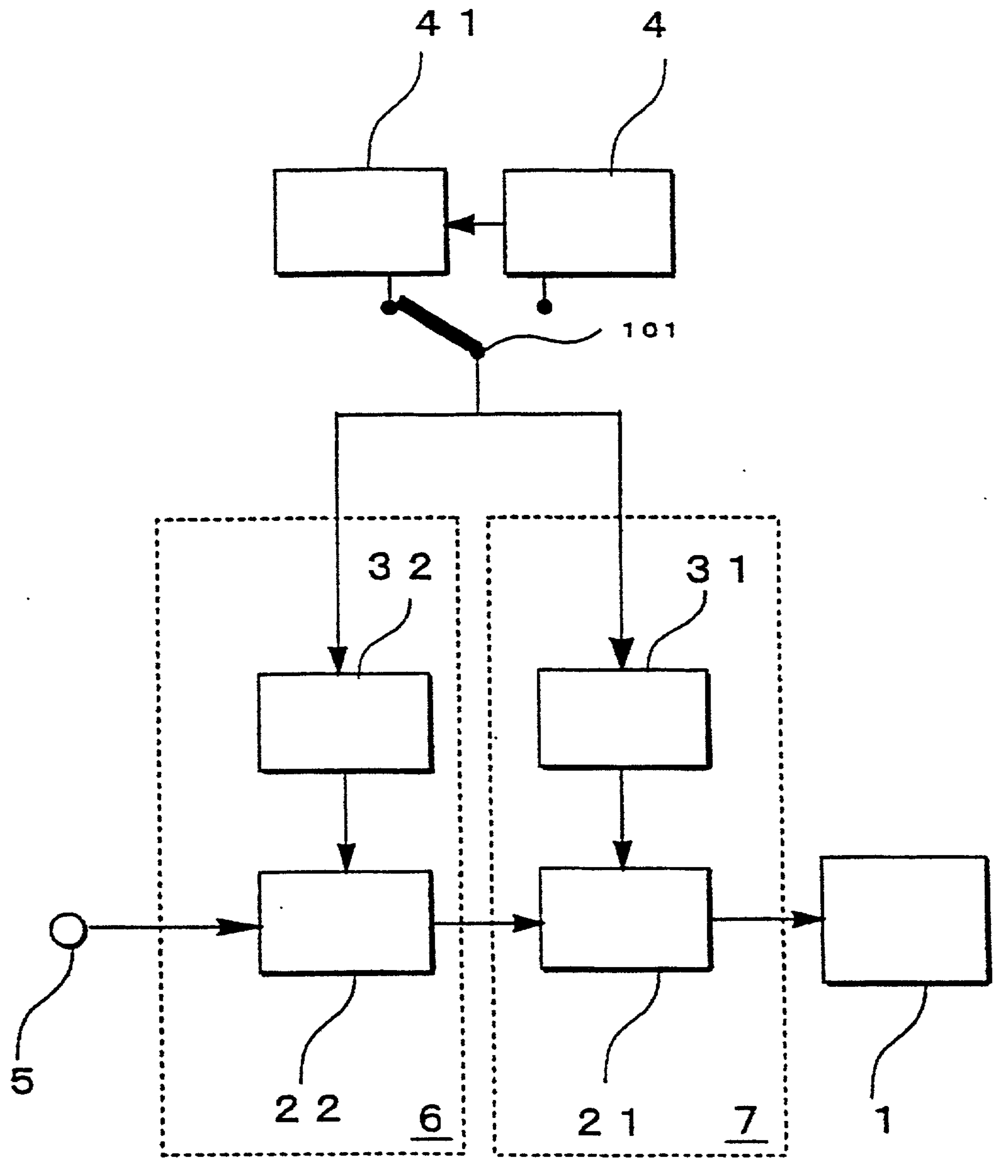


FIG. 12

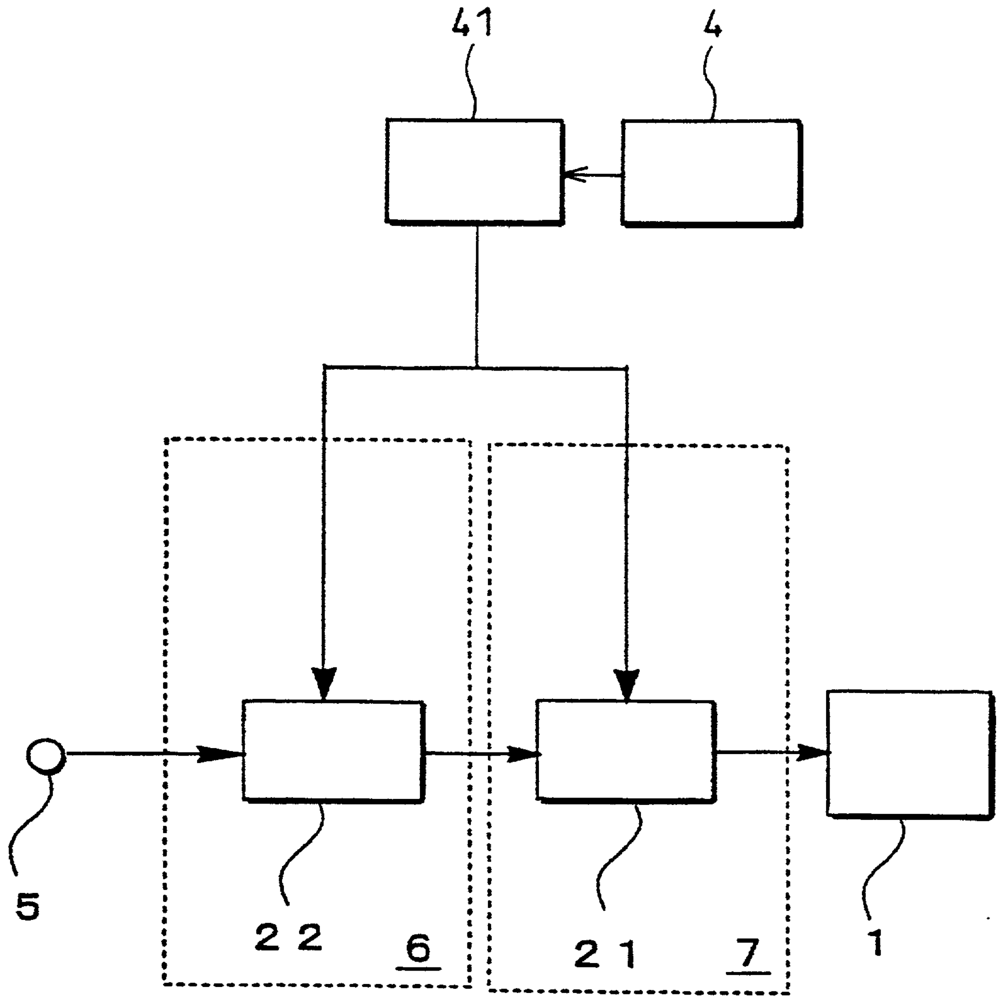


FIG. 13

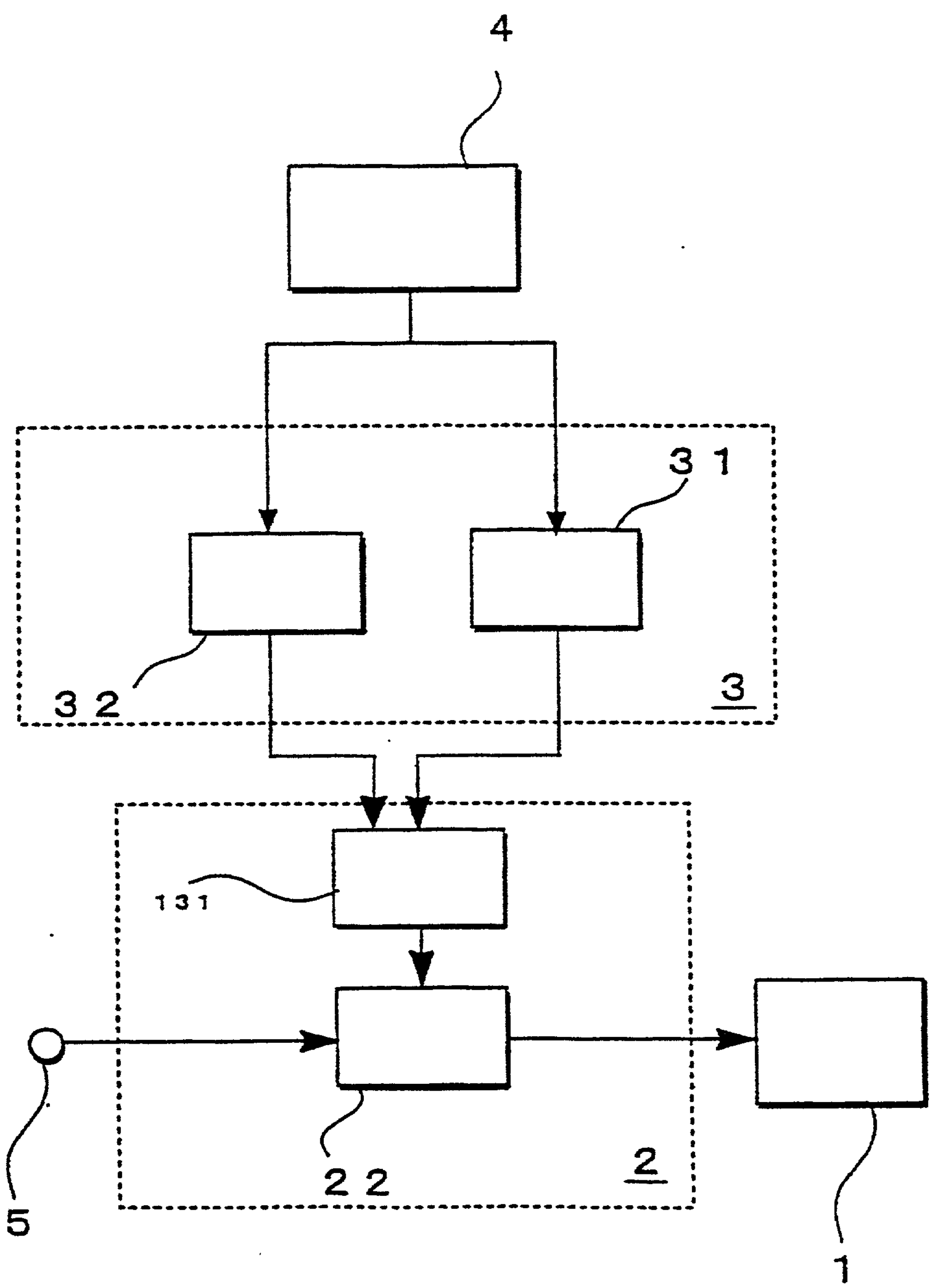


FIG.14

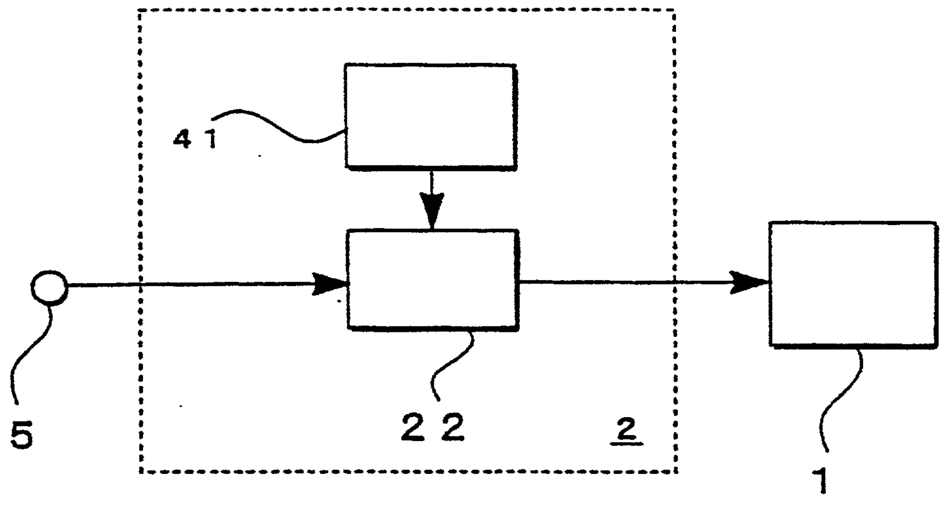


FIG. 15

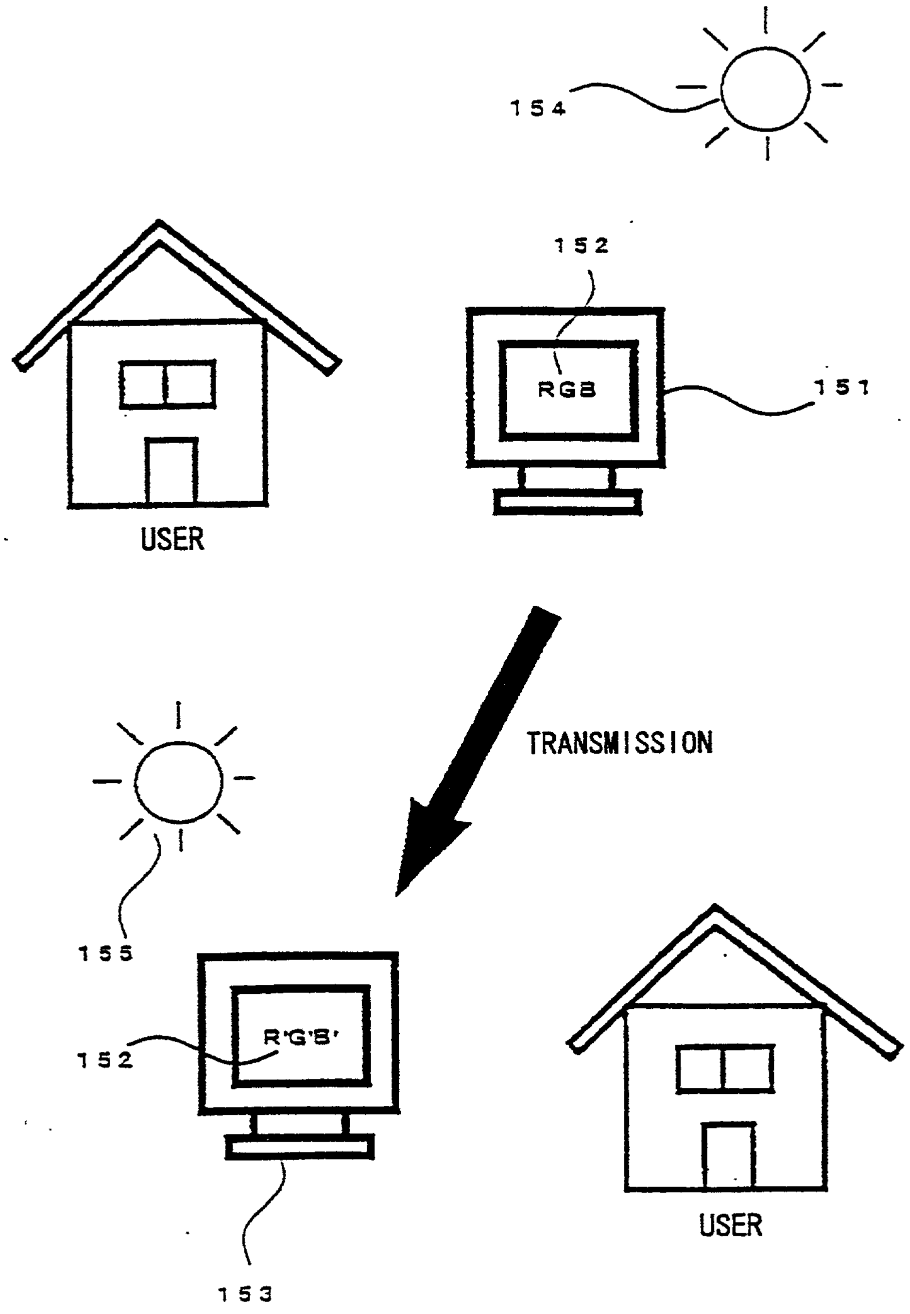


FIG. 16

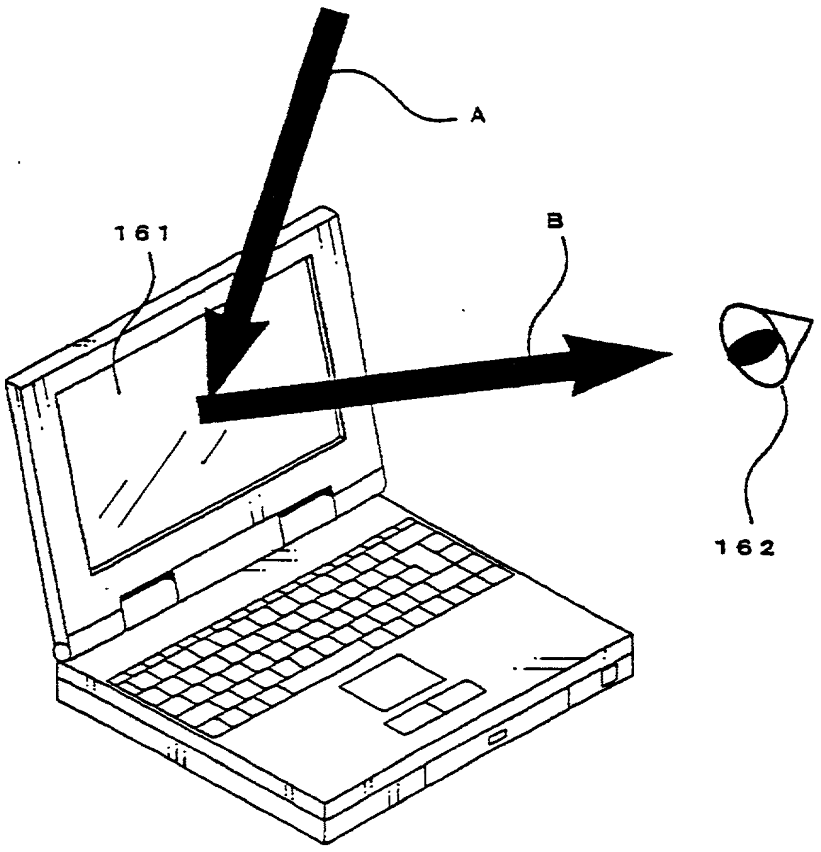


FIG. 17

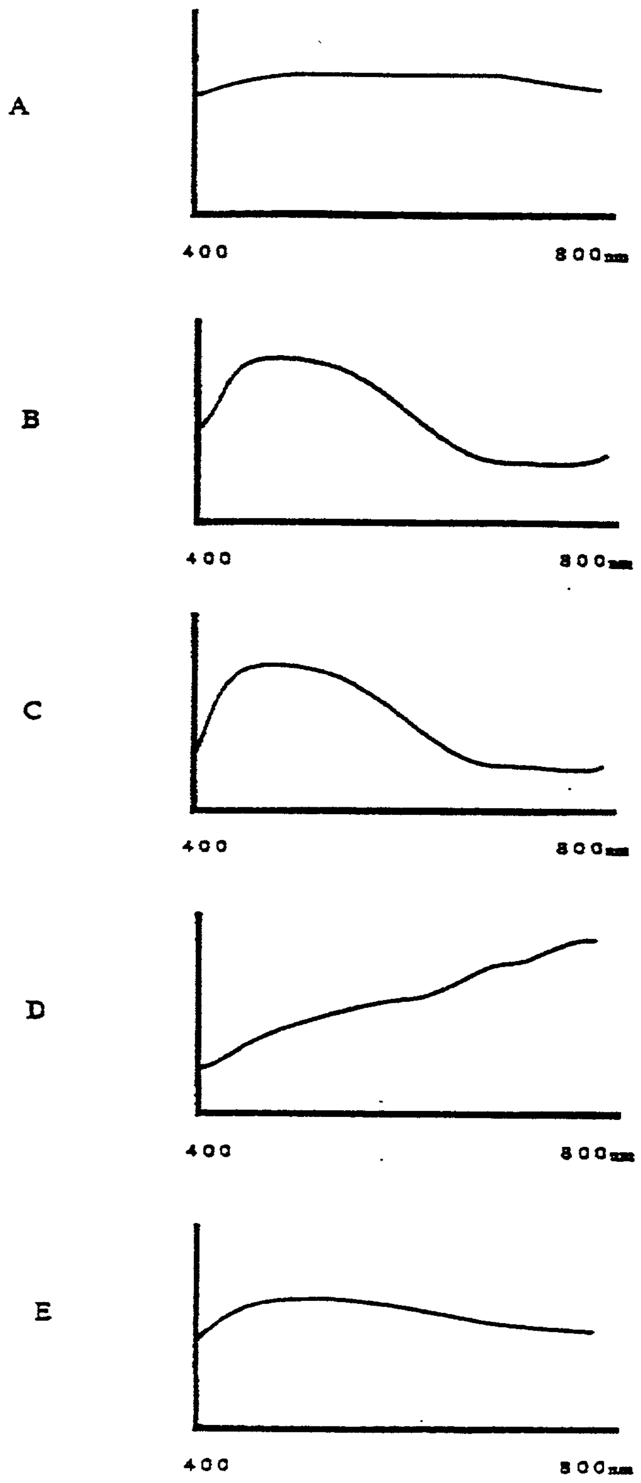


FIG. 18

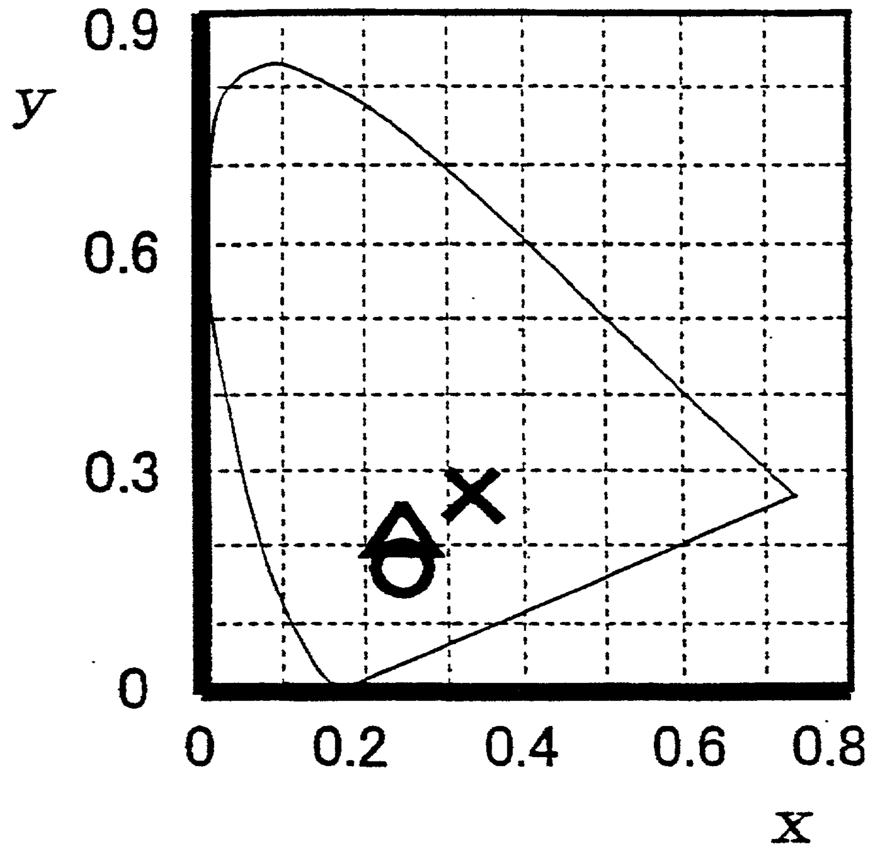


FIG. 19

```
/*********************
  transform Program
        for
      colour
    coordinate
*********************/
#include <stdio.h>
void
main()
{
        float
d[4][3],a[3][3],b[3],c[3],dd[3],r[3][3],kk[3][3],ss,sss;
        int     i,j,k;

        /* input x & y of RGBW */
        printf("INPUT RGB and White¥n");
        printf("Rx Ry Gx Gy Bx By Wx Wy¥n");
        scanf("%f %f %f %f %f %f %f %f", &d[0][0],&d[0][1]
                                        , &d[1][0],&d[1][1]
                                        , &d[2][0],&d[2][1]
                                        , &d[3][0],&d[3][1]);
/*
        d[0][0] = 0.67;
        d[0][1] = 0.33;
        d[1][0] = 0.21;
        d[1][1] = 0.71;
        d[2][0] = 0.14;
        d[2][1] = 0.08;
        d[3][0] = 0.31;
        d[3][1] = 0.316;
*/
```

FIG. 20

```
/* calculate z from x & y */
for(i = 0; i < 4; i++){
        if((d[i][0] + d[i][1]) > 1.0){
          d[i][2] = 0.0;
        }
        d[i][2] = 1.0 - d[i][0] - d[i][1];
}

printf("MATRIX¥n");
for(i = 0; i < 3; i++){
  printf("¥t");
  for( j = 0; j < 3; j++){
        printf("%5.3f¥t",d[i][j]);
  }
  printf("¥n");
}
```

FIG. 21

```
/* caluculate matrix */
{
  int i1, i2, j1, j2;
  for(i = 0; i < 3; i++){
      i1 = i + 1;
      i2 = i + 2;
      if (i1 > 2) i1 = 0;
      if (i2 > 2) i2 = i2 - 3;
    for(j = 0; j < 3; j++){
      j1 = j + 1;
      j2 = j + 2;
      if (j1 > 2) j1 = 0;
      if (j2 > 2) j2 = j2 - 3;
      a[i][j] = d[i1][j1]*d[i2][j2] - d[i1][j2]*d[i2][j1];
    }
  }
}
/* calculate of BUNBO */
for(i = 0;i < 3; i++){
  b[i] = 0;
  for(j = 0; j <3; j++){
    b[i] = a[i][j] * d[3][j] + b[i];
  }
}
```

FIG. 22

```
/* MATRIX */
for(i = 0; i < 3; i++){
  for(j = 0; j < 3; j++){
    a[i][j] = a[i][j] / b[i];
    r[i][j] = a[i][j];
    if(i == j){
        kk[i][j] = 1.0;
    } else {
        kk[i][j] = 0.0;
    }
  }
}
/* INVERSE MATRIX */
for(i = 0; i < 3; i++){
  for(j = 0; j < 3; j++){
    dd[j] = a[j][i];
    a[j][i] = 0.0;
  }
  a[i][i] = 1.0;
  for(j = 0; j < 3; j++){
    c[j] = a[i][j] / dd[i];
  }
  for(j = 0; j < 3; j++){
    for(k = 0; k < 3; k++){
      a[j][k] = a[j][k] - c[k]*dd[j];
    }
  }
  for(j = 0; j < 3; j++){
    a[i][j] = c[j];
  }
}
```

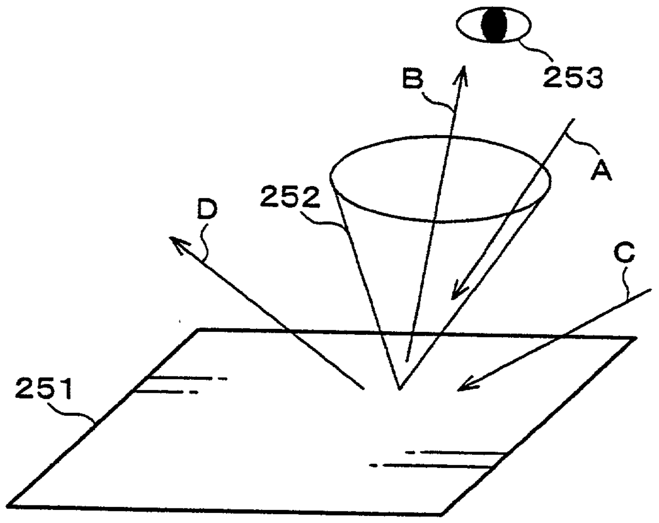
FIG. 23

```
/* SEIKIKA */
ss = a[1][0] + a[1][1] + a[1][2];
sss = r[1][0] + r[1][1] + r[1][2];
for(i = 0; i < 3; i++){
  for(j = 0; j < 3; j++){
  a[i][j] = a[i][j] / ss;
  r[i][j] = r[i][j] / sss;
  }
}
```

FIG. 24

```
    /* result */
    printf("original data¥n");
    for(i = 0; i < 4; i++){
      printf("¥t");
      for( j = 0; j < 3; j++){
            printf("%7.5f   ",d[i][j]);
      }
      printf("¥n");
    }
    printf("MATRIX¥n");
    for(i = 0; i < 3; i++){
      printf("¥t");
      for( j = 0; j < 3; j++){
            printf("%7.5f   ",r[i][j]);
      }
      printf("¥n");
    }
    printf("INVERCE MATRIX¥n");
    for(i = 0; i < 3; i++){
      printf("¥t");
      for( j = 0; j < 3; j++){
            printf("%7.5f   ",a[i][j]);
      }
      printf("¥n");
    }
    for(i = 0; i < 3; i++){
      for(j = 0; j < 3; j++){
        kk[i][j] = a[i][0]*r[0][j] + a[i][1]*r[1][j] + a[i][2]*r[2][j];
      }
    }
    printf("KAKEZAN¥n");
    for(i = 0; i < 3; i++){
      printf("¥t");
      for( j = 0; j < 3; j++){
            printf("%7.5f   ",kk[i][j]);
      }
      printf("¥n");
    }
}
```

F I G. 2 5


253
B
A
252
D
C
251